

CLAIMS

*Sub B1*

1. A steel sheet having surface-treated zinc-based plating comprising a zinc-based plating layer, a chromium-free conductive intermediate layer and an organic resin layer, all of the layers being superimposed one on another in the order mentioned.

2. A steel sheet having surface-treated zinc-based plating according to claim 1, wherein the intermediate layer comprises at least one acid salt, the acid salt comprising at least one metal selected from the group consisting of Cu, Co, Fe, Mn, Sn, V, Mg, Ba, Al, Ca, Sr, Zr, Nb, Y and Zn.

3. A steel sheet having surface-treated zinc-based plating according to claim 2, wherein the acid salt can be derived from at least one acid selected from the group consisting of phosphoric acid, acetic acid, nitric acid and hydrofluoric acid.

4. A steel sheet having surface-treated zinc-based plating according to claim 1, wherein the intermediate layer has a coating thickness of 100 nm or more.

5. A steel sheet having surface-treated zinc-based

plating according to claim 1, wherein the organic resin layer includes at least one metal selected from the group consisting of Cu, Co, Fe, Mn, Sn, V, Mg, Ba, Al, Ca, Sr, Zr, Nb, Y and Zn.

5 ~~Sub~~ 6. A steel sheet having surface-treated zinc-based plating according to claims 1 to 5, wherein the organic resin layer has a coverage of 10 to 80% with respect to the intermediate layer.

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